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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/402,646	01/10/2000	MAURI TIKKA	PM264179	6243

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PILLSBURY WINTHROP, LLP  
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EXAMINER
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PEREZ GUTIERREZ, RAFAEL

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 09/03/2004

17

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/402,646

Applicant(s)

Tikka

Examiner

Rafael Perez-Gutierrez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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### DETAILED ACTION

1. This Action is in response to Applicant's amendment filed on June 24, 2004. **Claims 1-10** are now pending in the present application. **This Action is made FINAL.**

#### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**Claims 1-10** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Consider **claims 1, 4, and 9**, the limitation of "at least configuration parameters that are neither noise nor silence parameters" introduces new matter and fails to comply with the written description requirement because the specification of the present application does not specify or disclose, either implicitly or explicitly, that the regulation parameters include at least configuration parameters **that are neither noise nor silence parameters**.

Applicant relied upon on page 9 lines 1-9 and 20-22 to provide support for this subject matter, however, the Examiner respectfully disagrees with the Applicant that this portion or, for that matter, any other portion of the specification, support this limitation. For example, page 9 lines 20-22 recite that "The method of the invention can thus be applied by regulating the

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threshold value, **for instance, or alternatively** by changing the parameters of the filter, **for instance**". This portion, at best, provides an **example** (i.e., due to the "**for instance or alternatively**" language) of which parameters can be regulated (i.e., the threshold value or the parameters of the filter). This portion is completely silent as to which parameters **are not** regulated and, furthermore, due to the exemplary language used in this portion, a legitimate question can be raised as to whether or not noise or silence parameters may or may not be regulated. MPEP 2173.05(i) states that any negative limitation or exclusionary proviso must have basis in the original disclosure and any claim containing a negative limitation which does not have basis in the original disclosure should be rejected under 35 U.S.C. 112, first paragraph. Since the written description of the present application, as explained above, does not set forth which parameters are not regulated, the new limitation added to claims 1, 4, and 9 introduces new matter.

For purposes of applying prior art, this new limitation is being read in accordance with Applicant's specification (i.e., a prior art reference that regulates parameters of discontinuous transmission but is silent in terms of excluding specific parameters such as noise or silence parameters (i.e., it may or may use noise or silence parameters) anticipates the limitation).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in

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section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. **Claims 1, 2, 9, and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Suwanen et al. (WO 96/42142)** in view of **Jarvinen et al. (U.S. Patent # 5,960,389)**.

Consider **claim 1**, Suwanen et al. clearly show and disclose a method for controlling the capacity (load) in a mobile communication system in a system in which at least one mobile station (MS) includes means for utilizing discontinuous transmission (combination of speech encoder 22, TXDTX 23, and voice activity detector (VAD) 25) (figure 2 and page 13 lines 11-19), comprising:

transmitting a command (control signal) via a radio path to said at least one MS in order to regulate the parameters indicating how discontinuous transmission should be implemented by said at least one MS (when Suwanen et al. calculates parameters for background noise that are used for updating the noise parameters at the receiving side; read in accordance with Applicant's specification) (figure 2 and page 13 line 20 - page 15 line 30); and

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regulating, by regulation means (combination of TXDTX 23 and voice activity detector (VAD) 25), of said at least one MS as a response to said command (control signal), parameters indicating how discontinuous transmission should be implemented in such a manner that at least one MS transmits telecommunication signals to the system more seldom or more often (as explained above, by calculating parameters for background noise that are used for updating the noise parameters at the receiving side) (figure 2 and page 13 line 20 - page 15 line 30).

However, Suvanen et al. do not specifically disclose that the regulated parameters include at least configuration parameters that are neither noise nor silence parameters.

In the same field of endeavor, Jarvinen et al. clearly disclose a method for regulating discontinuous transmission by controlling (regulating) configuration parameters that are neither noise or silence parameters (e.g., filter coefficients and filter parameters) (column 1 lines 50-53, column 3 lines 50-54, column 7 lines 59-63, column 8 lines 61-66, column 25 lines 45-52, and column 28 line 66 - column 29 line 9).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to regulate filter parameters as taught by Jarvinen et al. in the method of Suvanen et al. in order to control the load of the system by regulating filter parameters used during discontinuous transmission.

Consider **claim 2**, and **as applied to claim 1 above**, Suvanen et al., as modified by Jarvinen et al., further disclose that the command (control signal) is provided to the control regulation means (combination of TXDTX 23 and voice activity detector (VAD) 25) for regulating at least those parameters upon which the at least one MS can discriminate between

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speech conveyed to a microphone 21 and background noise in such a manner that the at least one MS interprets the noise arriving at the microphone 21 as background noise often (figure 2 and page 13 line 20 - page 15 line 30).

Consider **claim 9**, Suvanen et al. clearly show and disclose a mobile station (MS) comprising:

a radio unit 24 (transmission means and reception means) for receiving and transmitting telecommunications signals via a radio path (figure 2, page 13 line 33 - page 14 line 3, and page 15 line 32 - page 16 line 2);

a microphone 21 (user interface) for receiving an acoustic sound (e.g., voice signals) (figure 2, page 13 lines 23-25, and page 14 lines 6-9);

control means (combination of speech encoder 22, TXDTX 23, and voice activity detector (VAD) 25) for utilizing discontinuous transmission, whereby the control means (combination of speech encoder 22, TXDTX 23, and voice activity detector (VAD) 25) comprises a voice activity detector (VAD) 25 (signal processing means) for processing the voice signals received through the microphone 21 (user interface) by utilizing parameters, which indicate how discontinuous transmission should be implemented, and which are stored in the MS in order to detect speech from the voice signals received through the microphone 21 (user interface) (page 13 line 23 - page 15 line 17);

detection means (not shown) for detecting a command (predetermined control signal) received by the radio unit 24 (transmission means and reception means) via the radio path (figure 2 and page 14 lines 4 and 5); and

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regulation means (combination of TXDTX 23 and voice activity detector (VAD) 25), responsive to the detection means (not shown), for changing said parameters which indicate how discontinuous transmission should be implemented and which are utilized in speech detection in such a manner that the voice activity detector (VAD) 25 (signal processing means) interpret the voice signals received through the microphone 21 (user interface) as background noise more seldom or more often (when Suvanen et al. calculates parameters for background noise that are used for updating the noise parameters at the receiving side; read in accordance with Applicant's specification) (figure 2 and page 13 line 20 - page 15 line 30).

However, Suvanen et al. do not specifically disclose that the changed parameters include at least configuration parameters that are neither noise nor silence parameters.

In the same field of endeavor, Jarvinen et al. clearly disclose a method for regulating discontinuous transmission by controlling (changing) configuration parameters that are neither noise or silence parameters (e.g., filter coefficients and filter parameters) (column 1 lines 50-53, column 3 lines 50-54, column 7 lines 59-63, column 8 lines 61-66, column 25 lines 45-52, and column 28 line 66 - column 29 line 9).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to regulate filter parameters as taught by Jarvinen et al. in the method of Suvanen et al. in order to regulate discontinuous transmission by changing filter parameters used during discontinuous transmission.

5. **Claims 3-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Suvanen et**



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**al. (WO 96/42142) in view of Jarvinen et al. (U.S. Patent # 5,960,389), as applied to claims 1 and 9 above, and further in view of Kokko et al. (U.S. Patent # 5,790,534).**

Consider **claim 3, and as applied to claims 1 and 2 above**, Suvanen et al., as modified by Jarvinen et al., suggest that the interference level (traffic load) in the radio path is monitored, however, they do not specifically disclose that the traffic load in different parts of the mobile communication system is monitored and said command (control signal) is transmitted to certain MSs or MSs in a certain area, when the traffic load in some part of the system exceeds a predetermined limit, whereby said certain MSs or MSs in a certain area that have received the command (control signal) regulate their parameters in such a manner that they transmit telecommunication signals to the other parts of the system more seldom.

Kokko et al. clearly show and disclose a CDMA cellular system (mobile communication system) and a load control method for said system in which the traffic load in different parts of the system is monitored, by a load monitor 14B (figure 1), and a transmission prohibition (control signal) is transmitted to certain mobile stations 12 (MSs) or MSs in a certain area, when the traffic load in some part of the system exceeds a predetermined limit, whereby said MSs that have received the transmission prohibition (control signal) regulate their parameters related to discontinuous transmission in such a manner that they transmit telecommunication signals to the other parts of the system more seldom than before (column 6 lines 24-43, column 6 line 65 - column 7 line 7, column 7 line 48 - column 8 line 7, and column 10 lines 52-67).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the load monitor 14B taught by Kokko et al. in the method

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of Suvanen et al., as modified by Jarvinen et al., in order to control the load of the system in accordance with the traffic load in different parts of the system. The motivation to do so would have been to optimized the load of the system and to efficiently manage the resources available in the system.

Consider **claim 4**, and **as applied to claims 1, 3, and 9 above**, Suvanen et al., as modified by Jarvinen et al., further show and disclose that the mobile communication system comprises:

- a mobile switching centre (exchange) (MSC) (figure 1);
- base station systems (BSS) in data transmission connection to the MSC (figure 1);
- mobile stations MSs in a radio connection to the base stations and comprising means for utilizing discontinuous transmission (combination of speech encoder 22, TXDTX 23, and voice activity detector (VAD) 25) (figures 1 and 2); and

- regulation means (combination of TXDTX 23 and voice activity detector (VAD) 25) for regulating parameters of the mobile stations indicating how discontinuous transmission should be implemented in response to a command (control signal) in such a manner that said MSs transmit telecommunication signals to the system more seldom or more often (by calculating parameters for background noise that are used for updating the noise parameters at the receiving side) (figures 1 and 2 and page 13 line 20 - page 15 line 30).

However, Suvanen et al. do not specifically disclose that the system comprises monitoring means for monitoring the load in different parts of the system and that said command (control signal) is transmitted by the BSS to certain MSs or MSs in a certain area, when the

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monitoring means indicate that the traffic load in some part of the system exceeds a predetermined limit.

Kokko et al. clearly show and disclose a CDMA cellular system (mobile communication system) in which the traffic load in different parts of the system is monitored, by a load monitor 14B (monitoring means) (figure 1), and a transmission prohibition (control signal) is transmitted by a base station 14, to certain MSs or MSs in a certain area, when the traffic load in some part of the system exceeds a predetermined limit (column 6 lines 24-43, column 6 line 65 - column 7 line 7, column 7 line 48 - column 8 line 7, and column 10 lines 52-67).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the load monitor 14B taught by Kokko et al. in the system and of Suvanen et al. in order to control the load of the system in accordance with the traffic load in different parts of the system. The motivation to do so would have been to optimized the load of the system and to efficiently manage the resources available in the system.

Consider **claims 5-7, and as applied to claim 4 above**, Kokko et al. also disclose that the load monitor 14B (monitoring means) (figure 1) is arranged to monitor the amount of available resources (free traffic capacity) of either a certain base station 14 or a packet switched data transmission connection between at least one base station 14 and a MSC, via base station controller 16, belonging to the system, whereby the transmission prohibition (control signal) is transmitted by the base station 14, to all MSs from a which a traffic connection is in progress via said base station 14 when the amount of available resources is below the predetermined limit value (column 6 lines 24-43, column 6 line 65 - column 7 line 7, column 7 line 48 - column 8

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line 7, and column 10 lines 52-67).

Consider **claim 8**, and **as applied to claims 4-7 above**, Kokko et al. further disclose that the quality of traffic channels of a certain base station 14 is monitored and the transmission prohibition (control signal) is transmitted by the base station 14, to all MSs from a which a traffic connection is in progress via said base station 14 when the quality of the traffic channels is below a predetermined limit (column 7 line 48 - column 8 line 7).

#### ***Response to Arguments***

6. Applicant's arguments with respect to **claims 1, 4, and 9** have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office Action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any response to this Office Action should be **faxed to (703) 872-9306 or mailed to:**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Hand-delivered responses** should be brought to

220 S. 20<sup>th</sup> St.  
Crystal Plaza Two, Lobby, Room 1B03  
Arlington, VA 22202

9. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Rafael Perez-Gutierrez whose telephone number is (703) 308-8996. The Examiner can normally be reached on Monday-Thursday from 6:30am to 5:00pm.


If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Marsha D. Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700 or call customer service at (703) 306-0377.

  
Rafael Perez-Gutierrez  
R.P.G./rpg **RAFAEL PEREZ-GUTIERREZ**  
**PATENT EXAMINER**

September 2, 2004

  
9/2/04  
**LESTER G. KINCAID**  
**PRIMARY EXAMINER**